

## TOY GARBAGE TRANSPORTATION TRUCK

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

The present invention is directed to a toy garbage transportation truck comprising a cargo space for the garbage that is to be disposed of, having an opening on its rear to which an emptying casing for garbage cans that are to be emptied is adjoined that has a rear discharge opening.

## 2. Background Art

Toy vehicles of this type are intended to copy the large original in their outer appearance while leaving out details and are further intended to permit an imitation of the functions of such vehicles.

## SUMMARY OF THE INVENTION

Starting from a vehicle of this type according to the preamble, the invention therefore has as its object to create the greatest possible play incentive in such a way that the vehicle incorporates a high functionality while ensuring a simple operation that is appropriate for a child, and especially also sturdiness over a long period of time.

This object is met according to the invention in such a way that the floor below the discharge opening is curved approximately in the shape of a segment of a circle and transitions into a slanted feeding surface extending to below a feeding opening, that a conveyor shovel is disposed above the floor, that said conveyor shovel can be swiveled along the floor above the same, lifted parallel to the slanted feeding surface to at least the lower edge of the feeding opening and subsequently swiveled back and lowered to then reach the end of the floor on the discharge opening side and repeat the conveyor movement again.

It is thus possible to imitate, by means of a relatively simple kinematic sequence, the very complicated hydraulically actuated sequence of movements of the natural model and implement a play function that is very attractive for the child.

In a further improvement of the invention, provision is made for the transporting movement of the conveyor shovel to be manually driven by means of a turning knob mounted in a side wall of the emptying casing.

The actuating turning knob may be provided with a gearing that is in engagement with the gearing of a transfer wheel that is also mounted on the side wall. In this way an overload protection is implemented, as the carriers of the gearing may elastically give way when the playing child continues to turn the actuating turning knob after a blockage has occurred, resulting in a slipping of the gearing.

A particularly advantageous mechanical design is implemented in such a way that the transfer wheel incorporates a radially extending guide slot into which a cam peg engages that extends, parallel to the swivel bearing axis of the conveyor shovel at a distance to the same, away from a transfer member located on the swivel bearing, said swivel bearing of the conveyor shovel being guided along a that extends approximately parallel to the slanted feeding surface at a partition wall formed parallel to the casing wall.

It is thus made possible to convert a simple turning motion into a lifting-swivel-lowering motion in such a way that the swivel motion of the conveyor shovel at the respective lower or upper end of the lifting path is created in such a way that the first guide slot that revolves by 360° with the transfer wheel approaches the respective upper or lower radial

overlapping position with the second guide slot and passes over this overlapping position.

The emptying casing may be mounted at the rear upper edge of the cargo space in a manner so that it can be swiveled upward and locked in this position.

An emptying pusher advantageously extends crosswise through the cargo space and is mounted in a manner so that it can be moved in the longitudinal direction by means of a turning knob, which is operated from the outside and has an inside gearing, and a toothed rack in order to thus accomplish a discharging movement.

In the region of the lower edge of the discharge opening for the garbage cans, a receiving device for the garbage cans may be disposed that can be swiveled upward by means of a lateral pivoted lever.

The invention will be explained in more detail below based on a preferred embodiment in combination with the drawing.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows a perspective view of the function-essential parts of an inventive vehicle without side and cross walls,

FIG. 2 shows a cross section seen from behind,

FIG. 3 shows a section of the right side, viewed in the driving direction, along the center longitudinal plane,

FIG. 4 shows an illustration corresponding to FIG. 3 with a conveyor shovel swiveled by 90°,

FIG. 5 shows a section along the center longitudinal plane on the left side, viewed in the driving direction,

FIG. 6 shows an illustration corresponding to FIG. 5 with the conveyor shovel swiveled further by 90°, and

FIG. 7 shows a schematic longitudinal section through the entire vehicle.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

A toy vehicle 1 shown in the drawing comprises, on a chassis 2, a cargo space 3 having a rear opening 4 and an adjoining emptying casing 5 for garbage cans not shown in the drawing.

The emptying casing 5 has a feeding opening 6 that is aligned with the opening of the cargo space 4 and also a rear discharge opening 7 for the garbage cans.

A floor 9, the cross-section of which is a segment of a circle and which transitions into a slanted feeding surface 10, the upper edge 11 of which practically forms the lower edge of the feeding opening 6, extends from the region of the lower edge 8 of the discharge opening 7.

Above the floor 9 a conveyor shovel 12 is mounted that can be lowered in the direction of the arrow 13 to pick up garbage emptied onto the floor 9 from the garbage cans and then, when its lower edge 14 has reached the outer end 9' of the floor 9, swiveled concentrically to the floor 9 in the direction of the arrow 15 and subsequently lifted in the direction of the arrow 16 parallel to the slanted feeding surface 10 so that the garbage picked up by the conveyor shovel 12 from the floor 9 can be deposited over the upper edge 11 of the slanted feeding surface 10 into the feeding opening 6 and thus into the cargo space 3.

The conveyor shovel 12 is swivel-mounted around a swivel bearing 17 which, in turn, is mounted on a telescoping guide 18, the upper end of which is fixed to a swivel bearing 19.

The conveyor movement of the conveyor shovel 12 is accomplished as follows: